

614-10.

20 May 96

FRANKLIN
INSTITUTE
LIBRARY

Household Garbage Carbonizer



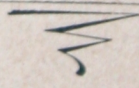
TERMS.

OUR terms are invariably F.O.B. cars New York City unless otherwise agreed, and bill subject to sight draft without previous notice after 30 days from date of same, or 2% discount for cash 10 days from date of invoice. Orders for samples must be accompanied by cash.

The prices and discounts herein quoted to apply only to our standard Carbonizers. Should we manufacture other forms greater or less in cost than those herein quoted, new prices and a new line of discounts will be made for them. When goods are ordered in larger quantity than we put in an original package (one sample) we shall make a charge for this package which will be made as reasonable as possible.

When the carrier who is to convey the goods to the consignee receipts for them as in good order then our responsibility ceases and we will not entertain any claims for breakage or damages.

Discount sheets for the trade will be sent on request.



Sanitary Construction Company,

56-58 PINE STREET, NEW YORK.

MANUFACTURERS

OF THE

Household Garbage Carbonizer

For the Disposal of Domestic Waste,

OF

Steam Disinfecting Apparatus

For Public Institutions and Cities,

AND

FURNACES FOR THE CREMATION OF REFUSE.

FACTORY AND WAREROOMS,

211 WEST 33D STREET,

NEW YORK.



THE DISPOSAL OF KITCHEN WASTE

BY THE

HOUSEHOLD GARBAGE CARBONIZER.

It has been urged by some of the leading sanitary authorities in this country that the best way of disposing of the household waste is its destruction by fire on the premises where produced. To the housekeeper this process, if performed in a cleanly and inoffensive manner, would remove one of the most annoying troubles incident to home life. When done on a large scale, the advantage in a pecuniary sense to municipal authorities by the private disposal of all putrescible matter would be an enormous saving in money which could be better applied to some more useful purpose.

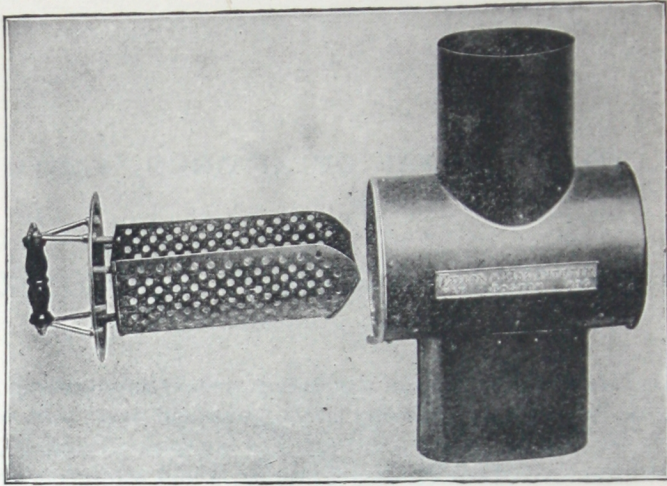
But to burn fresh kitchen "swill" with a hot fire in the kitchen stove takes fuel and time, is attended with noxious odors in the house, destroys the stove fittings and linings, and in the end the stove or range itself. Manifestly there is needed a device which will reduce the garbage to a form in which it can be burned without offence.

The Household Garbage Carbonizer

is a new invention which uses the surplus heat from the fire to drive off by evaporation the liquids contained in the waste, and afterward utilizes the results of this process as a fuel.

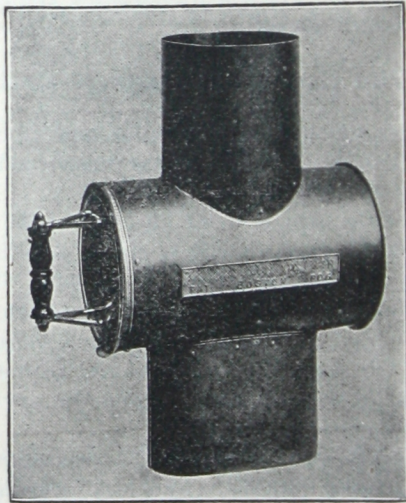
In the joint of the pipe or elbow that makes the connection between the stove or range and the chimney flue is placed a horizontal cylinder or drum somewhat larger than the stove-pipe connections. One end of this Cylinder is permanently closed, the other removable, and attached to the inside of this end is a Basket or tray made of perforated iron shorter and smaller than the Cylinder itself. The area of space around this Basket when set in this Cylinder is larger than the area of the pipe from the stove or range, so that there can be no obstruction of the draught.

When in use the Basket is charged with the kitchen waste, returned to the Cylinder into which the Basket sets by a locking device, and the heat from the fire passing around the scoop and through the perforations drives off the moisture in a short time, turning the contents into charcoal; this dried and



BASKET.

CYLINDER.



CLOSED (AS IN USE).

charred waste is then put upon the fire and utilized as fuel, or after being left over night, used to kindle the morning fire.

The passage of the heat evaporates the moisture without the discharge of empyreumatic odors, such as are generated by the direct contact of wet garbage with the fire ; the process may be repeated as often as required, the quantity of garbage carbonized being governed by the size of the Basket and the temperature of the heat from the stove. Small quantities of liquids are received in the bottom of the scoop, which is not perforated.

Being placed in the pipe, the CARBONIZER does not interfere with the use of the stove for any domestic purpose. It occupies space not otherwise in use, it is automatic in action, requires but little attention, uses no extra fuel, may be made of large or small size proportioned to the number of persons in a family, can be adjusted to connect with any size or form of smoke-pipe under almost every possible condition or location, and can be applied to any form of stove or range where connection with a chimney flue is to be had.

The Household Garbage Carbonizer

is constructed in two separate parts, as will be seen by the accompanying drawings : see page 4, the BASKET, or receptacle for the garbage, and the CYLINDER or jacket into which the Basket is set.

The Basket comprises the following parts : The concave head, made of rolled sheet brass nickel plated, corrugated to give it stiffness, and stamped with the name and patents of the Company ; the brackets or lugs, which attach the handle to the head ; the wooden handle ; the spindle, which passes through the handle, secured by nuts top and bottom, and the perforated scoop or pan for receiving the garbage. This pan is made of cold rolled steel and attached by nuts to the brackets and head.

The Cylinder which receives the Basket is made of Russia iron throughout, except the iron ring into which the Basket sets.

The connection for the smoke-pipe from the stove on the lower side of the Cylinder is usually oval in form, but may be round or square to correspond with the connecting pipe. The outlet for the smoke, usually round in form, may be on top of the Cylinder, or on the right or left-hand side of the Cylinder, or at the end. (See various diagrams, pages 18, 20, 22).

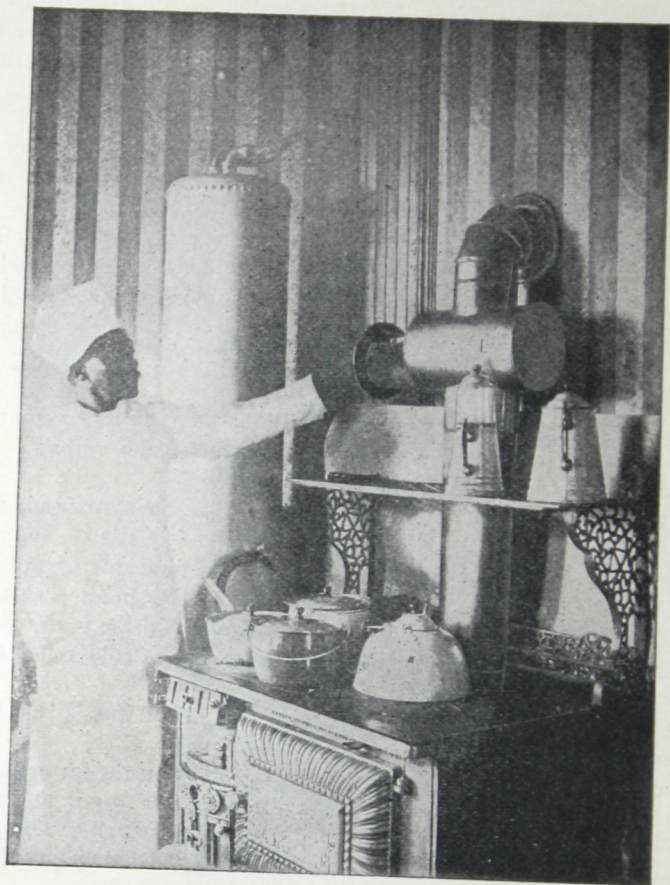
There are two standard sizes of the CARBONIZER made for household use.

No 1 : Diameter of Cylinder, 8 inches ; smoke-pipe connections, 5, 6, 6½ inches ; capacity of Basket for one charge, 4 quarts.

No 2 : Diameter of Cylinder, 9 inches ; smoke-pipe connections, 7, 8, 9 inches ; capacity of Basket, 7 quarts.

There are three styles of each of the two standard sizes which are found to be mostly called for. These are :

THE VERTICAL. This is placed in a vertical stove-pipe at any height desired. The collar connections are usually oval below the CARBONIZER and round above, but may be both oval or both round if required. It can be



VERTICAL.

made to be withdrawn either by the right or left hand. This is the pattern mostly used, and is fitted with the 6-inch collars. (See page 6.)

THE SHORT ELBOW. This sets on the top of the stove or range, and connects with the chimney by a pipe at right angles, or from the end of the Cylinder. There are several forms of this style, with longer or shorter stove connections, as may be required, and with various ways of making chimney connection. (See page 8.)

THE LONG ELBOW. For attachment some distance above the stove, thence direct to the chimney, the Basket being inserted from the front. (See page 10.)

In practical use it will be found that these three styles of either the 8 inch or the 9-inch size will be all that will be required for the greatest number of stoves or ranges now in use.

The *Special Styles* include those forms of CARBONIZERS which do not come under the standards, and which must be made to fit any special dimensions.

HORIZONTAL. For attachment to the stove or range where there are double pipes connecting either below or above the hot shelf, the CARBONIZER being set at the intersection. (See page 12.)

The small Horizontal can also be used for attachment from the back of the stove direct to the chimney, where there is a single pipe.

THE PORTABLE CARBONIZER. This is a form which can only be used by removing the covers of the stove or range, placing the CARBONIZER in their place. There are several styles of this method; and though the operation is very quickly and thoroughly done, all have the disadvantage of requiring to be put into position and removed after the carbonization is accomplished.

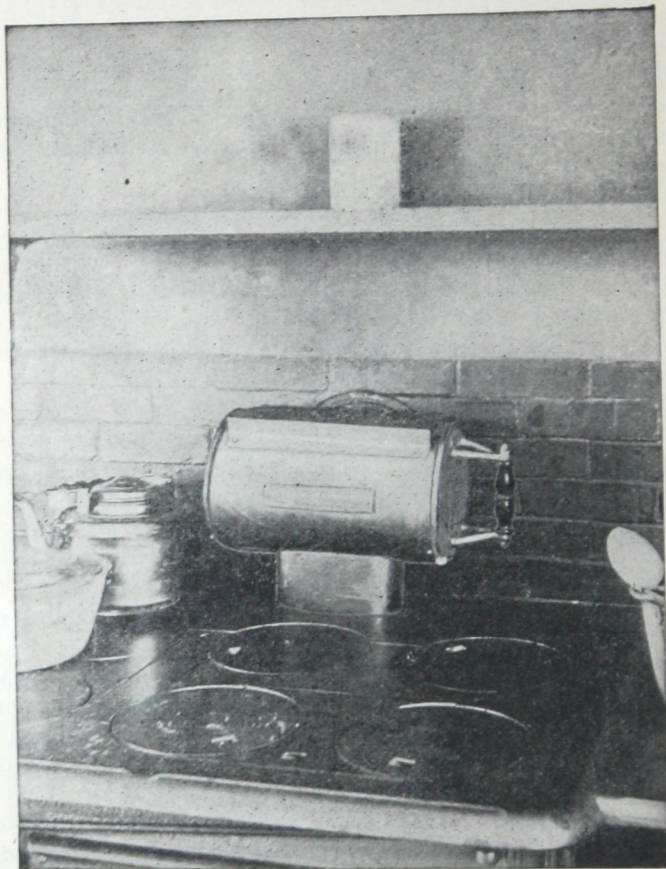
FOR GAS STOVES AND RANGES. The use of the CARBONIZER for gas stoves and ranges requires connection with a chimney flue; this may be made very small—not more than 3 inches in diameter.

As a rule, the heat from the ovens of the gas stove or range, which is the only waste heat that can be utilized, is not sufficient to thoroughly carbonize the garbage; it is therefore necessary to have a gas burner set in the base of the CARBONIZER. The work is then done quicker than by the use of coal, requiring a very insignificant amount of gas. (See page 14.)

THE DOUBLE CARBONIZER. In some cases where large quantities of garbage are produced, and where there are two smoke-pipes from the range, it has been found convenient to put two CARBONIZERS into position, thereby doubling the capacity of the apparatus. (See page 16.)

Another form of DOUBLE CARBONIZER adapted to a single smoke-pipe is shown in the diagram on page 18. The No. 2 size of this style has carbonized 3 cubic feet of garbage in one hour, equivalent to the disposal of 30 cubic feet of miscellaneous household waste in 12 hours.

THE SET RANGE. For ranges which are set in brick, and where the pipe from the stove passes up at the back and is not exposed, the covering plate at the front of the flue is removed and other plates substituted which have the required orifice for the Basket. In this case the operation is the same as



SHORT ELBOW.

in the long elbow. A Portable CARBONIZER, can be used in all these cases with perfect efficiency.

SPECIAL SIZED CARBONIZER. For still larger work a CARBONIZER of a special size is made, comprising a vertical drum which may be rectangular in shape, and which will carry very large Baskets. The Baskets are made cylindrical and permanently set in the drum, the garbage being fed through doors at the top, and after being carbonized the charcoal is taken out through sliding doors at the bottom. This is a continuous operation, and is adapted for stoves and ranges which are set at a distance from the chimney of not less than 2 feet, or may be applied to connections from boilers and house heaters to a chimney. In a similar way the waste heat from steam boilers can be utilized to carbonize garbage of a large establishment, provided there is room to enlarge the flue to the chimney so as to receive a Basket of proportionate size.

In all cases the Cylinders or jackets are made of steel or Russia iron, and the smoke-pipe connection usually of the same materials. The Basket and fittings being made of nickel plate and the handle of ebonized wood, the outside appearance is in accordance with the most finely finished stove or range.

THE SANITARY CONSTRUCTION COMPANY will furnish any desired quantity of CARBONIZERS complete (Basket and Cylinder and collar connections) of either size or any pattern that may be required.

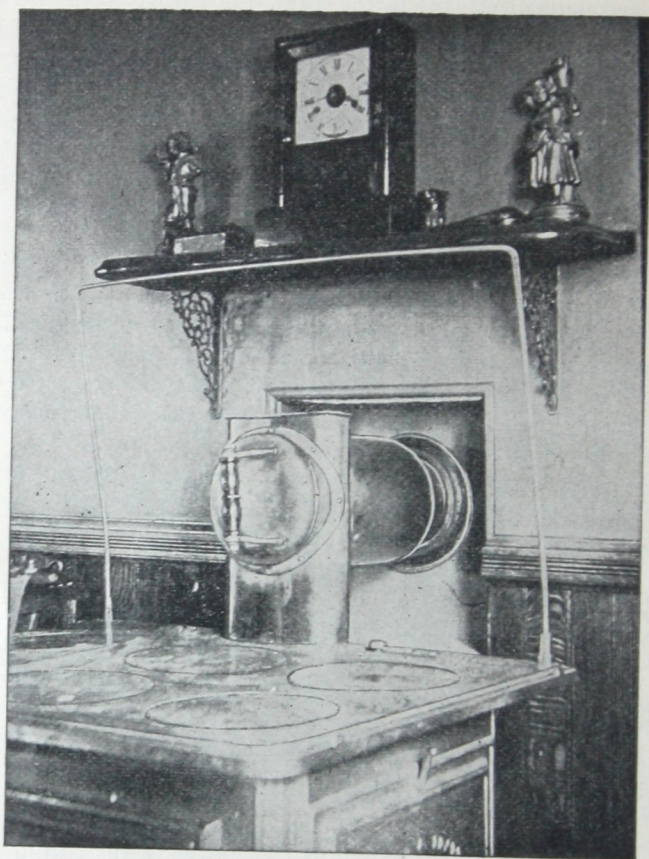
The Company will also furnish the two sizes of Cylinders *rolled up and uncut, without the collar attachments*, but with the Basket fitted into the Cylinder. This method of handling the invention is found to be the best way in which to order it. The Cylinders can be quickly cut, the collars made up and attached, of whatever size of pipe required and in whatever position they may come. Any sheet-iron or tinsmith workman of ordinary intelligence can make and attach these collars and easily fit them to pipe connections of the stove. An extra discount to the trade is made on this style, to allow for expense of making the collars.

When orders are received for single CARBONIZERS for trial or as sample, the No 1 Vertical Style will be sent unless special directions for other styles or larger dimensions be given.

The cost of placing the CARBONIZER in position is a charge to be paid by the purchasers. This should be small, covering only the cost of labor and the charge for any extra pieces of pipe needed.

Special Note.

Where the draught of the chimney is slow, it will be found best to use a 9-inch short Cylinder, with a Basket of the 8-inch size. This allows a larger area around the perforated "scoop," and prevents any choking of the draught. In all doubtful cases use this method. The Cylinder will be 9 inches in diameter, 13½ inches long, with the 9-inch head attached to the 8-inch (4-quart) Basket, thus doubling the area of space around the scoop, affording a free passage to the heat.

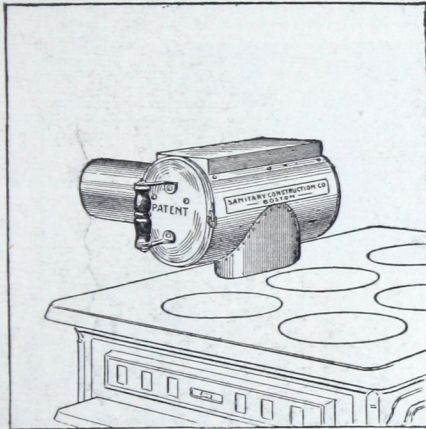


LONG ELBOW.

Directions for Placing Cylinder and Attaching the Carbonizer.

The style and size of the CARBONIZER to be attached to any given range is a matter in which some judgment must be exercised.

When there is a single vertical pipe without interference of the hot shelf or upper ovens, it is easy to make the attachment ; but where there are two pipes, and their intersection is too high above the floor so as not to be easily reached by the servant, then the CARBONIZER should be set in one or the other pipe—preferably the left-hand one—below the hot shelf.

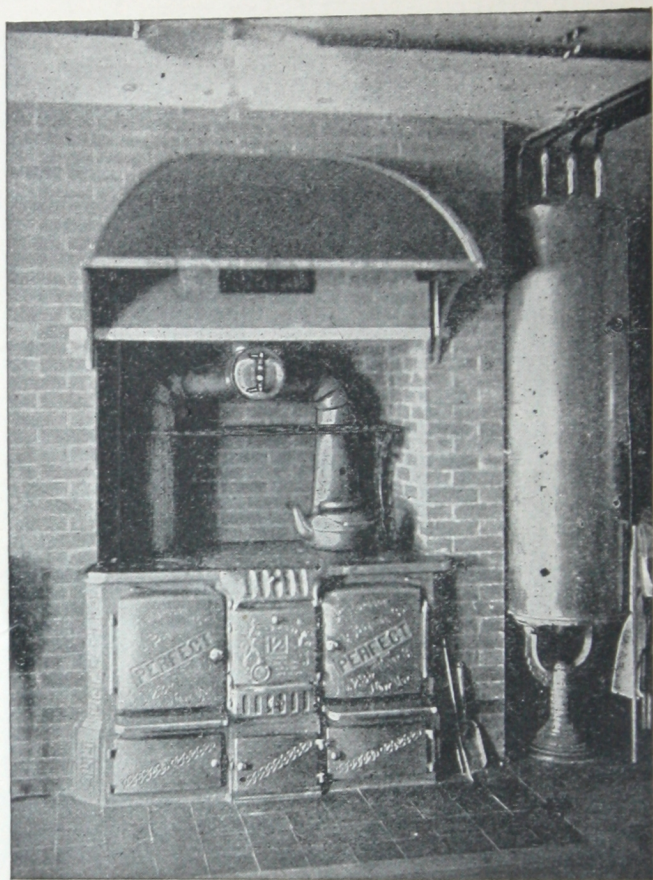


In placing the CARBONIZER on the long or short elbow, the distance from the stove to the chimney will decide as to which form will be used.

It is important in all attachments to see that the heat from the stove passes in as nearly as possible at the front of the CARBONIZER and escapes by the rear, either on the top, side, or end ; this will expose the whole area of the Basket to the heat.

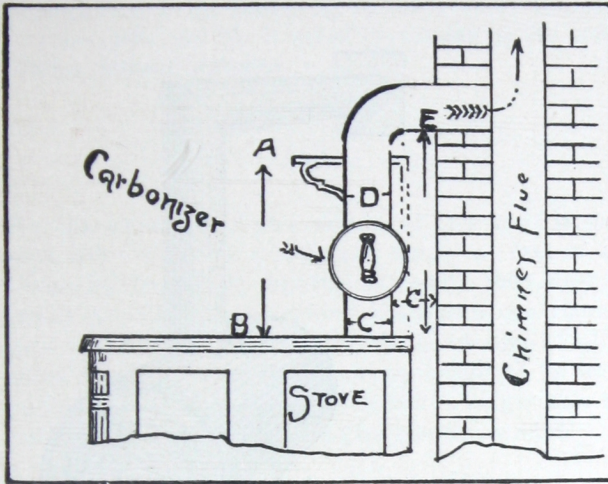
In special cases make a sketch of the CARBONIZER in position, the stove and the chimney flue, as the smoke-pipes vary greatly in dimensions and description, and give exact measurements, so as to guide the workman in making up the collars.

Families of from five to ten persons will take the 8-inch No. 1 size ; and where there are from nine to twenty, the No. 2, 9-inch size.



HORIZONTAL.

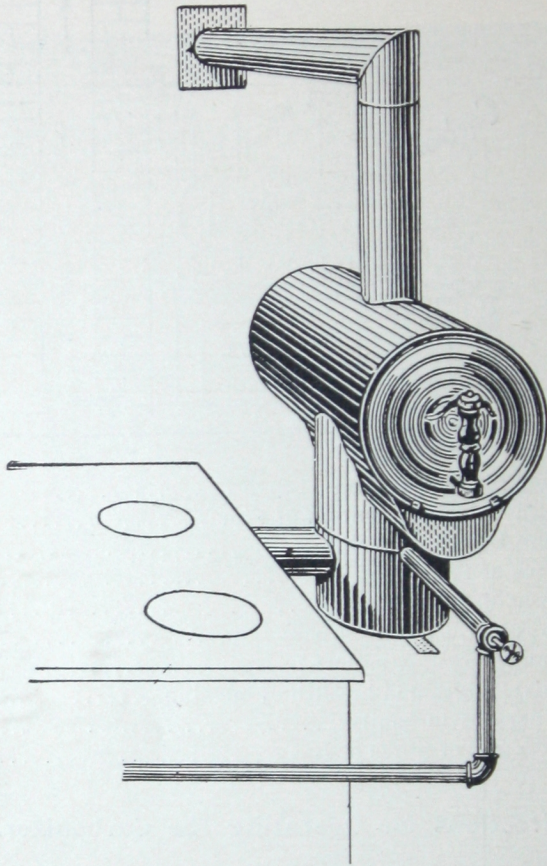
Take the preliminary measurements as shown on the following diagram or a somewhat similar form :



- Distance from Shelf *A* to top of Stove *B*
- Distance from Stove *B* to bottom of Pipe *E*
- Distance from Pipe *C* to Wall
- Circumference of Pipe at *C*
- Circumference of Pipe at *D*
- Is Pipe at *C* round, oval, or square ?
- Is Pipe *D* round, oval, or square ?
- If square, give length and breadth of opening
- Number of persons in family
- Number and name of Stove or Range

Directions for Operating the Carbonizer.

Fill the Basket not more than two-thirds full for the first charge of the day, and when this is carbonized put it into the fire-box and replace by fresh garbage. Liquids should be drained out of the garbage before being put into the Basket. For this purpose we can furnish a strongly made galvanized wire strainer, which stands in the kitchen sink. When there is a considerable amount of fatty substance, see that this is mixed with vegetable matter, so that when carbonization is complete, the charcoal remaining in the scoop will have absorbed the grease which has been tried out. *Do not overload the Basket, nor expect it to do all the work at once. Give it time.* Keep the Basket clean, and occasionally remove the soot which will collect on the inside of the Cylinder.



CARBONIZER FOR GAS STOVE.

In filling the Basket, withdraw it about two thirds of its length and replace as quickly as possible, as the draught from the stove will be checked while the Basket is out.

Do not attempt to pull the Basket out by main force ; but, taking hold of the handle, tip it a trifle, and lift it out of the catches on the bottom ; then it can be withdrawn without difficulty.

Note.

One of the difficulties natural to a reform of this kind is the opposition of the servants, who do not as a rule take kindly at first to any novelty. They labor under the impression that this will add to their work, whereas the contrary is really the case. There are hundreds of instances where the cooks, at first the violent enemy of the CARBONIZER, by the exercise of a little patience and explanation from the mistress become convinced of its usefulness, and are thereafter its warmest friends. They should be taught how to use it, and then their co-operation is secured and endless trouble avoided.

RETAIL PRICE LIST.

	List No.	Diameter of Cylinder.	Capacity for One Charge.	Retail Price.
<i>Standard Styles :</i>	No.	Inches.	Quarts.	\$
Vertical.....	1	8	4	5.00
Short Elbow.....	2	9	7	6.50
Long Elbow.....		(See pages 6, 8, 10.)		
<i>Special Styles :</i>				
Horizontal.....	1	8	4	6.00
".....	2	9	7	7.50
		(See page 12.)		
For Gas Stove.....	1	8	4	6.50
" " ".....	2	9	7	7.50
		(See page 14.)		
Double.....	1	8	8	8.00
".....	2	9	16	10.00
		(See page 16.)		
Portable.....	1	8	4	6.00
".....	2	9	7	7.50



DOUBLE CARBONIZER.

Reports and Letters.

(No. 1886.)

HALL OF THE FRANKLIN INSTITUTE,
PHILADELPHIA, September 25, 1895.

The *Franklin Institute*, of the State of Pennsylvania, for the Promotion of the Mechanic Arts, acting through its Committee on Science and the Arts, investigating W. F. Morse & Company's Household Garbage Carbonizer, finds as follows :

The invention is covered by letters patent of the United States No. 540,080, dated May 23d, 1895, granted to George Taylor and Martin Bernard McLauthlin, and may be briefly described as follows :

The apparatus is designed to be placed in the stove-pipe between the stove or range and the flue of the chimney, and becomes a permanent fixture. It consists of a horizontal cylinder about one-third larger in diameter than the stove-pipe in which it is to be placed. One end of the cylinder is removable, and attached thereto on the inside is a semicircular pan or scoop perforated along both sides and having solid ends and a tight bottom. The pan is sufficiently smaller in diameter than the cylinder to admit of being easily withdrawn and to give a free passage to the fire gases from the stove around it and through the perforated sides.

When it is necessary to use the apparatus, the pan or scoop is withdrawn by means of the handle provided, the refuse from vegetables that have been prepared for cooking, or the waste from the table is placed in it, and the pan is replaced in the cylinder.

The heated gases from the fire coming in contact with the Carbonizer and its contents, first dry the stuff by driving off the water, and in a short time the continued action of the fire gases on the dried material chars it, converting it more or less completely into a porous mass of charcoal, which may be thrown upon the fire and burned, or, as suggested by the applicant, may be removed from the scoop and used from time to time as kindling to start the fire in place of shavings or wood.

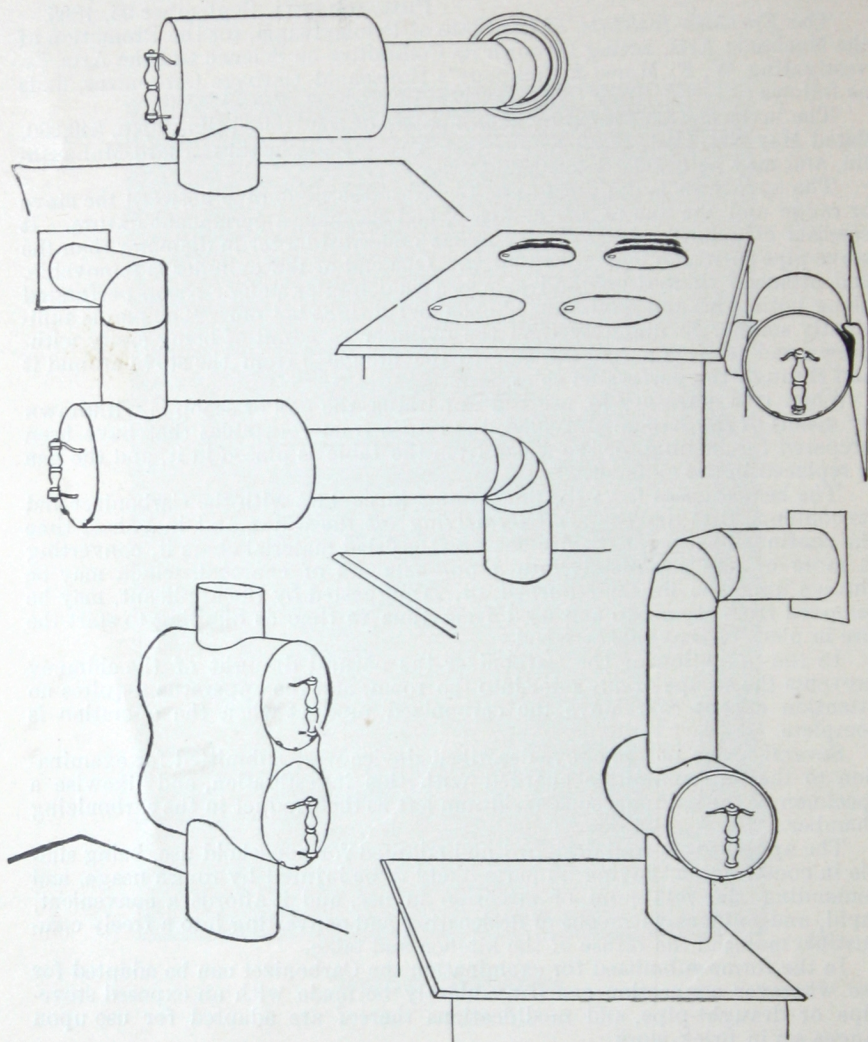
In the operation of the Carbonizer the natural draught of the chimney prevents the escape of any odor into the room, and the apparatus requires no attention except to remove the carbonized product when the operation is complete.

Several forms of the above-described device were submitted for examination to the sub-committee charged with this investigation, and likewise a specimen of the carbonaceous residuum left as the product in the carbonizing chamber.

The apparatus is well designed and adapted for household use, being simple in construction, having no parts likely to be injured by rough usage, and demanding the minimum of attention in use, and it affords a convenient, rapid, and inoffensive means of desiccating and converting into a freely combustible material the refuse of the kitchen and table.

In the forms submitted for examination the Carbonizer can be adapted for use wherever connection can conveniently be made with an exposed stove-pipe or draught-pipe, and modifications thereof are adapted for use upon ranges set in brick-work.

There can be but one opinion respecting the advantages which would follow the general use by the community of some convenient contrivance by which each household would be able quickly and inoffensively to destroy its own garbage, without permitting it to accumulate. Colonel George E. Waring, the well-known Sanitary Engineer, concisely states this view of the case in the following terms : " Removal from the houses by public service should be limited to clean ashes and such refuse as cannot be burned, sold, or given away. Nothing should be thrown into the streets or deposited for removal



by the public scavenger that can, even at some cost and inconvenience, be disposed of on the premises where it is produced."

Such disposition of this material, if generally adopted, would contribute materially to the cleanliness and wholesomeness of the surroundings of city dwelling houses, and especially of those in the poorer and thickly populated districts, where the exposure of garbage in all stages of fermentation and putridity to await the often uncertain visits of the public garbage collector constitutes a nuisance offensive to decency and prejudicial to health.

The *Institute* commends this invention as convenient and useful for its intended purpose, and awards to the inventors, George Taylor, of Boston, and Martin Bernard McLauthlin, of Malden, a Certificate of Merit.

(Place of the seal.)

Adopted at the stated meeting of the Committee on Science and the Arts, held
Wednesday, November 6th, 1895.

JOSEPH M. WILSON, *President*.

WILLIAM H. WAHL, *Secretary*.

Countersigned by

SAMUEL SARTAIN, *Chairman*.

HEALTH DEPARTMENT, OLD COURT HOUSE,
BOSTON, May 10, 1895.

The Sanitary Construction Company :

GENTLEMEN : In answer to your request, I am very glad to say that I have had your Kitchen Garbage Carbonizer in constant use in my kitchen since the first of August, 1894, beginning its use in connection with my kitchen stove at the beach, and continuing it with my range in the city to the present time. It has given no odor or trouble of any kind, but has pleased the cook very much by its convenience, and the charcoal kindling which it has furnished for the morning fire. We are all gratified with the total abandonment of the swill bucket in the yard ; and what is done with the wastes in my kitchen can be done in every kitchen.

If this apparatus were brought into general use it would stop the well-known nuisances of more than 50,000 swill-buckets in this city, bring a healthful convenience to as many families, hotels, and restaurants, relieve our streets of swill-carts, save our treasury nearly \$200,000 annually, and spare the Health Department many other annoyances.

It is an odd thing for me to give a written endorsement for any patented article ; but it is more odd to find an article that strikes the home comfort and convenience like this one, and I know of no way by which I can serve the sanitary and economical interests of the city better. I have for years urged the fact that such an apparatus could be used in our kitchens, and I am personally grateful to you for bringing it forward.

You are at liberty to use this in any way you choose.

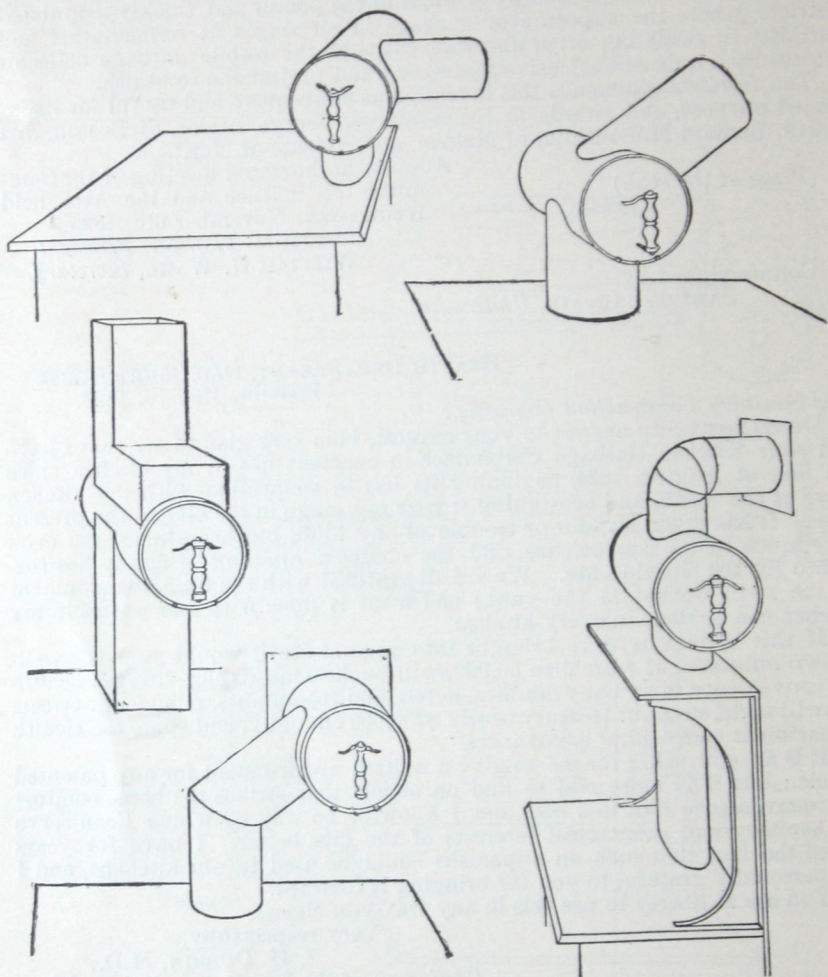
Very respectfully,

S. H. DURGIN, M.D.,

Chairman of the Boston Board of Health.

TOWN OF BROOKLINE,
OFFICE OF THE BOARD OF HEALTH,
April 27, 1895.

GENTLEMEN : In reply to your inquiries as to my experience with the Garbage Carbonizer, I can say it has given complete satisfaction. It has now been in constant use in our kitchen for some time, has disposed of all our swill without the least inconvenience or offence, and has contributed every



morning some useful kindlings. Furthermore, the cook, at first rather sceptical as to the advantages of the new device, and very fearful that it would dampen the fire or obstruct the draught, is now its most eloquent champion.

If the Carbonizer were generally adopted, the great sanitary question of the proper disposal of kitchen refuse would be solved, many thousands of dollars would annually be saved to municipalities, many nuisances would cease to exist, and an actual saving in fuel for kindlings would be made.

Wishing you success in introducing this much-needed sanitary reform, I am
Yours truly,

H. LINCOLN CHASE, M.D.,
Agent of the Board of Health.

BOSTON, April 30, 1895.

GENTLEMEN: Your Garbage Carbonizer, placed in my house some three months ago, has more than met my expectations, and does more than claimed for it. The mechanical and scientific ideas introduced into its make-up puts at rest all doubts of its success. We have consumed all garbage of whatsoever nature in this apparatus, and each morning have only a residue, or charcoal, to remove, and that placed in the fire-pot of the range acts as kindling for a new fire. The Carbonizer does not interfere with the draught.

I consider it of great advantage to every housekeeper, doing away with all trouble as to garbage such as exists under present conditions.

Respectfully,

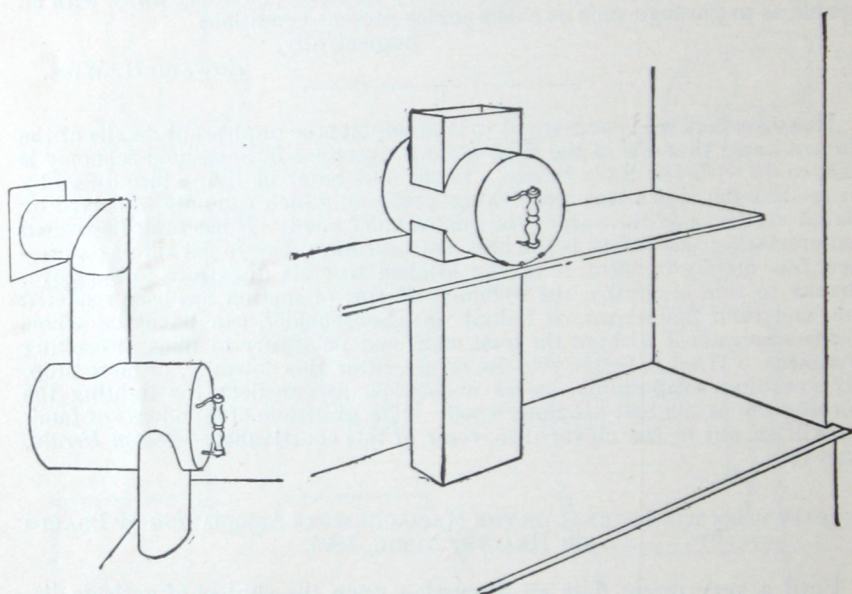
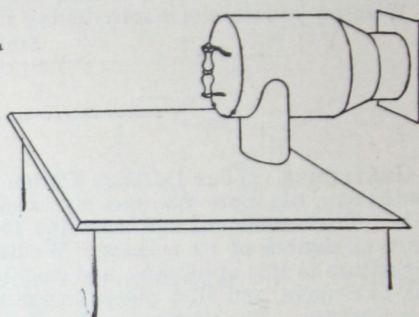
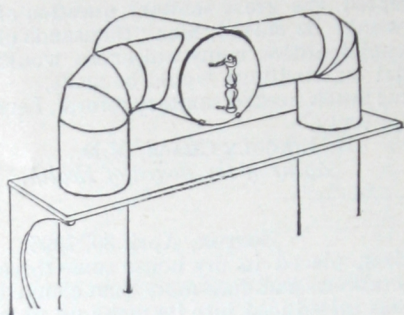
EDWARD H. WISE.

Housekeepers who condescend to contemplate the unpleasant details of the kitchen know that one of the most serious questions in household economy is what to do with the daily refuse. In the new order of living introduced by the modern flat it is a very perplexing problem, which can only be solved by eternal vigilance on the part of the mistress and maid. It has been discovered that cremating this refuse is the best and healthiest way to get rid of its presence, but merely to burn it in the kitchen stove is disastrous to the stove. Thanks to this invention, the difficulty of this cremation has been rendered null, and each flat tenant, or indeed any householder, can have the whole business consumed without the least odor, and no injury to flues or cooking apparatus. What is better yet, the refuse, after this burning, or more properly speaking, evaporation, leaves a charcoal as excellent for lighting the morning fire as the best kindling wood. The gratitude of hundreds of families will go out to the clever discoverer of this contrivance.—*Boston Herald*, June 12th.

EXTRACT FROM THE JOURNAL OF THE MASSACHUSETTS ASSOCIATION OF BOARDS
OF HEALTH, APRIL, 1895.

Until a very recent date all discussion upon the subject of garbage disposal has been directed solely upon the selection of some one of the many expensive public methods, none of which can be brought into use until after the garbage has been endured upon the premises for a time as a nuisance, collected at public expense, and has become intolerable. These methods of dealing with garbage cannot be called preventive medicine, but rather curative, with the physician called at a very late stage of the disease.

We have here represented a single device which deals with all kitchen wastes successfully, with less care and trouble than with the bucket in the yard, and with no odor or objectionable feature whatever. The garbage is



dried to a charcoal by the waste heat in the stove-pipe, and is used as a fuel to kindle the morning fire. This method is clean, convenient, inexpensive and within the reach of all classes. It is what we call "preventive medicine" in the truest sense, and is worthy of our best attention.

In my opinion, the true method is for each one—each family—to care for and dispose of its own filth. All the trouble comes from trying to put it off on some one else. By the use of the domestic garbage cremator, we entirely dispense with the garbage bucket, and all its attendant evils and dangers. We save the cost to the city of carrying the garbage away from the house, and the cost of disposing of it. We conduce to public cleanliness and health in the most approved manner. The only expense is that of the device. No extra fire is necessary. No garbage is formed, because the refuse is thrown into the cremator as the plates are cleaned, before fermentation, when no offensiveness is possible.

E. N. WORDIN, A. M., M. D., Bridgeport, Conn.

Removal from the houses by the public service should be limited to clean ashes and such refuse as cannot be burned, sold, or given away. Nothing should be thrown into the streets or deposited for removal by the public scavenger that can, even at some cost and inconvenience, be disposed of on the premises where it is produced.

COLONEL GEORGE E. WARING, JR.,

Street Cleaning Commissioner of the City of New York.

DEPARTMENT OF STREET CLEANING,

CITY OF NEW YORK.

GEORGE E. WARING, JR.,

Commissioner.

NEW YORK, December 20, 1895.

Sanitary Construction Company, 56-58 Pine Street, New York City.

GENTLEMEN: I am glad to say that the Carbonizer which you put up in connection with the range at my apartment some four or five weeks ago has worked to my entire satisfaction, and that, from all I have seen and heard of the invention, I look forward with confidence to its early general adoption.

Yours very truly,

GEORGE E. WARING, JR.

FROM THE REPORT OF THE COMMISSIONER OF STREET CLEANING TO MAYOR STRONG, NEW YORK CITY, FEBRUARY 10TH, 1896.

It is known that garbage cannot be economically utilized if it is mixed with any considerable quantity of rubbish or ashes; it is known that it cannot be economically incinerated unless it is separated at least from the bulk of the ashes with which, under the prevailing New York practice, it is mixed; it is known that ashes cannot be safely used as a filling material so long as they contain such waste organic matters as constitute the garbage and some of the rubbish of city collections; it is also known that a very considerable part of garbage and of rubbish, as collected throughout the city, is of sufficient value to pay more than the cost of its collection.

It may be that the amount of garbage to be handled will be greatly reduced, and that the reduction will relate largely to its richer and more valuable portions, AS A RESULT OF THE INTRODUCTION OF THE HOUSEHOLD PROCESS OF DESTRUCTION OR CARBONIZATION IN CONNECTION WITH THE KITCHEN FIRE. After several months'

use of this method in my own house, and with a good deal of knowledge as to its use elsewhere, I am inclined to believe that this, or some similar device, will solve a very large part of the garbage problem; and that such garbage as is still to be dealt with will be of a character to be more easily treated by natural processes in connection with the ashes.

Two serious objections exist to the separate collection of garbage. One relates to the maintaining of a separate receptacle, which is almost invariably a nuisance to the householder, and another is the unavoidable swill-like odor of garbage carts passing through the streets in hot weather. When garbage is mixed with ashes its odor is to a very large degree arrested, and where the masses are small, putrefaction is hardly to be apprehended.

BOSTON, MASS., May 2, 1895.

GENTLEMEN: I am very happy to give you my endorsement of the Household Garbage Carbonizer. The one placed in my house some three months ago has since disposed of all the kitchen waste in a thoroughly satisfactory and sanitary manner.

I find the residuum of carbonized garbage is without taste or odor, and it is a most excellent fuel.

The device does not interfere with the draught nor in any way compromise the use of the range.

Yours truly,

C. A. YOUNG,

Deputy Superintendent Sanitary Division, City of Boston.

BOSTON, MASS., June 14, 1895.

GENTLEMEN: I have studied carefully your invention for carbonizing the garbage which accumulates in every kitchen in our city, which amounts to many tons and is deposited in barrels and left to fill the air with poisonous gases until the carts come to take it away, sometimes once a week.

Now, think for one moment that each house occupies on an average an area of 1200 feet, which will give some idea how near the garbage receptacles are which are throwing off into the atmosphere a poison we are inhaling asleep or awake.

I think your device should be used in every house in our city.

Truly yours,

L. NEWCOMB, *Architect.*

THE MUNICIPAL LEAGUE,

SCHENECTADY, November 20, 1895.

GENTLEMEN: At the suggestion of our Secretary I have looked into the merits of the Household Garbage Carbonizer, and we have had one in our house in use for nearly two months and are very much pleased with it.

We have now no accumulation of garbage, and, consequently, no garbage receptacle, with its disagreeable features. All scraps are put into the Carbonizer and are gradually dried and carbonized; when carbonized, the refuse can be burned—that is, used as fuel or kindling.

There is no odor escaping into the room, it all being carried off through the chimney. In fact, the Carbonizer does all that is claimed for it.

If the Carbonizer could be brought into general use, garbage would be all disposed of before it becomes a nuisance and a menace to the health of the public.

We should be pleased to have any or all of you inspect the Carbonizer that we have in operation.

E. M. HEWLETT,

Chairman of Committee.

THE WOMAN'S INSTITUTE, 38 PALISADE AVENUE,
YONKERS, N. Y., November 23, 1895.

SIRS : It gives us pleasure to be able to testify to the merits of the Household Garbage Carbonizer, which we have used in our School Kitchen for more than a month with great success.

We are trying to introduce it into the houses of Yonkers as a means of solving the perplexing and unpleasant question of the disposition of kitchen refuse.

Yours very truly,

(MISS) MARY MARSHALL BUTLER,

President of the Woman's Institute and Chairman of the Civic League.

To the Editor of The Yonkers Statesman :

In a recent report of the Board of Health attention was called to complaints in regard to the unsightly, unpleasant, and unsanitary conditions of the garbage wagons as seen upon our streets. The problem of the disposition of garbage is not only perplexing to house mothers, but burdensome to city fathers. It is, indeed, a question of vital importance ; and in our town, especially since the destruction of the crematory, it impresses itself upon us in more, or through more, senses than one.

Early in the summer the Civic League endeavored to aid a little in the solution of the difficulty by issuing a leaflet on " Hints as to the Care and Disposition of Garbage," which recommended the drying and burning of kitchen refuse in the kitchen range, whenever practicable and not liable to be offensive to neighbors. This has been tried, with considerable success, in several houses, but does not give unflinching satisfaction. At the Institute we have introduced an invention known as the Household Garbage Carbonizer, which has now been in use several weeks with such success that we can speak confidently of its merits and enthusiastically of its results.

The waste from ten classes in cookery is thus disposed of, the garbage man is dispensed with, and the refuse is turned into a useful article.

Having been impressed with the economic and sanitary features of this article by our actual experience in the use of it, we invite any who may so wish to investigate it in operation at the Institute.

MARY MARSHALL BUTLER,

President Woman's Institute,
Yonkers, N. Y.

120 EAST THIRTIETH STREET, NEW YORK CITY,
November 25, 1895.

GENTLEMEN : I am glad to express my entire satisfaction with the Household Garbage Carbonizer, after several weeks' trial of it, for I think it extremely desirable that its use should become general, both as a matter of health and convenience.

All refuse is disposed of after each meal without smell or trouble by using the Carbonizer, and I heartily recommend it to all housekeepers.

JOSEPHINE SHAW LOWELL.

We heartily endorse the above, after a personal trial of the Carbonizer for months.

MRS. FRANCES G. SHAW,
118 East Thirtieth Street, New York.
MRS. GEORGE WILLIAM CURTIS,
West New Brighton, S. I.

CORRESPONDENCE WITH MISS JEANNETTE L. GILDER, EDITOR OF "THE CRITIC."

December 28th, 1895, Miss Gilder writes : " We have made inquiries about your Household Garbage Carbonizer, and are very much interested in

it. From what we have heard we believe that it solves a knotty problem in housekeeping."

December 31st, 1895: "I want one for my apartment and another for my brother's house in Larchmont, N. Y. I am glad to hear that my friend, Colonel Waring, speaks so highly of the Carbonizer—his opinion is worth having. I am convinced that it is going to make a revolution in domestic economy."

January 30th, 1896: "The Carbonizer is working quite satisfactorily. It is one of the objects of interest in my apartment; and every one who comes to see me has to be taken into the kitchen to see its workings. It is regarded by every one as a great invention, and I believe the time will come when a Carbage Carbonizer will be as much a part of every range as the oven or grate."

Very truly yours,

JEANNETTE L. GILDER.

HARTFORD, CONN., December 28, 1895.

DEAR SIRs: We have had a Household Garbage Carbonizer in use for some six weeks and it has given great satisfaction.

I believe it to be a happy solution of the garbage problem in the city.

There is no difficulty in disposing of all household garbage by this process, which is simple, cleanly, and odorless.

I am convinced that this Carbonizer is a great advance in domestic sanitation.

Yours truly,

EDWIN KNOX MITCHELL.

125 MILK STREET, BOSTON,

January 13, 1896.

GENTLEMEN: The Household Garbage Carbonizer (7-quart) which you placed in Newton last summer has given entire satisfaction and has done all that was claimed for it.

Yours very truly,

WINFIELD S. HUTCHINSON.

HEALTH DEPARTMENT, BOSTON,

January 14, 1896.

GENTLEMEN: I have had in constant use in my house on Ruskin Street, West Roxbury, one of your Carbonizers, which has given my family great satisfaction.

A device so simple in construction and so excellent in its working will surprise any one who has not used it. To be rid of a swill barrel is such a convenience and a pleasure that one cannot help being enthusiastic in recommending the Carbonizer to others.

The success which has attended my use of your apparatus prompts me to cheerfully recommend it to others who have no knowledge of its utility.

Yours very truly,

CHARLES E. DAVIS, JR.

111 ST. MARK'S AVENUE, BROOKLYN,

January 20, 1896.

GENTLEMEN: Some time ago I had the Carbonizer I had used in Arverne brought to Brooklyn and put on the range in our house. We have been using it now six or eight weeks, and find it works very satisfactorily. Our cook uses it altogether.

Please send me some circulars, as a number of my friends who have seen it want to get one.

Very truly yours,

S. VALENTINE.

WEST ROXBURY, MASS., January 20, 1896.

GENTLEMEN : Concerning your Garbage Carbonizer, which was attached to my range the day before Christmas, notwithstanding the fears that were entertained of its interfering with the range in cooking our Christmas dinner ; but the draught gave perfect satisfaction then, and has continued to do so ever since ; which is saying a great deal, for the range has failed at times, thus proving that the Carbonizer has *augmented* the draught.

There is no trouble about its carbonizing all the garbage from our kitchen. Altogether it is the greatest economizer that has ever been added to the house-keeping department.

When I have caught the last of the horde of rats which have formerly fed from the old swill bucket I shall feel that our home has been rendered not only happier, but far more healthful by the acquisition of your Carbonizer.

I would like a few of your illustrated circulars.

Yours respectfully,

C. W. SPARHAWK, M.D.

THE BOSTON COOKING SCHOOL,
174 TREMONT STREET, BOSTON, MASS.,
January 20, 1896.

GENTLEMEN : Several weeks ago a Garbage Carbonizer was attached to one of our ranges. After a thorough trial, feeling confident of its merits, I am ready to cheerfully give my testimonial

Our large amount of refuse is quickly disposed of and the carbon which remains is utilized as fuel. Its benefits to the household are threefold :

1. Improvement of sanitary conditions.
2. Quick disposal of garbage.
3. Economy of fuel.

Appreciating its advantages, I have ordered one for the other school range and one for home use.

Very truly,

FANNIE MERRITT FARMER,
Principal.

32 PRATT STREET, HARTFORD, CONN.,
January 20, 1896.

DEAR SIR : All that we were led to expect from the use of the Household Garbage Carbonizer has been completely and most satisfactorily realized.

Very truly yours,

JAMES McMANUS.

PROVIDENCE, January 25th, 1896.

GENTLEMEN : Replying to your inquiry regarding the working of your Household Garbage Carbonizer, would say we have now used it for six months and have found it a perfect success. It removes a great nuisance around the house.

Yours truly,

NICHOLAS SHELDON,
219 Hope Street.

NORTHAMPTON, MASS., February 1, 1896.

GENTLEMEN : Having used the Household Garbage Carbonizer since the middle of last October, my former garbage can standing entirely empty and useless, I wish to give my testimony to its value.

It does not claim any too much attention ; and I would not be without it now that I have learned what a convenience it is. I take especial pains to recommend it to my friends and hope to induce more of them to try it.

You have my full permission to use this letter in any way that will advance the interests of the Carbonizer.

Very truly yours,

MRS. GEORGE W. CABLE.

HARTFORD, February 10, 1896.

DEAR SIR: I have found the Household Garbage Carbonizer, which has been in use at my house for some time past, to give complete satisfaction.

It has fulfilled all that was claimed for it, and is certainly a solution of the question as to the disposition of garbage.

Yours truly,

E. B. JOHNSON.

BROOKLYN, February 12, 1896.

GENTLEMEN: The Garbage Carbonizer you put on my range proves most satisfactory and does away with all the odor in the house.

Very truly yours,

E. B. REYNOLDS,
184 Patchen Avenue.

130 WEST FORTY-THIRD STREET, NEW YORK,

February 13, 1896.

GENTLEMEN: Regarding the Carbonizer attached to my range, will say that both the cook and kitchen-maid are delighted with the work it does, and find the charcoal a decided advantage in kindling fire.

This Carbonizer has answered satisfactorily for us the vexed question, "What shall be done with the garbage?"

When you consider that our household numbers not less than *forty* people, you will not wonder that we think the triumph an important one.

Sincerely yours,

SARAH E. GARDINER.

HEALTH DEPARTMENT OF THE CITY OF BINGHAMTON,

February 14, 1896.

TO WHOM IT MAY CONCERN: This is to certify that I have examined and used the Household Garbage Carbonizer and cheerfully recommend its use in this city. Its use gives me an easy and inoffensive method of getting rid of the ordinary house garbage, making use of the dried residue as a fuel. Every kitchen stove in this city should be equipped with this invention.

DANIEL S. BURR,
Health Officer.

ELMIRA, N. Y., February 16, 1896.

GENTLEMEN: The Carbonizer has effectually carbonized the material inserted in it, and has surprised and pleased all who have witnessed its operation.

It is on sale in this city, and, I have been told, has elicited praise from the housekeepers who have given it a trial.

Truly yours,

WILLIAM C. WEY, M.D.

227 CLINTON STREET, BROOKLYN,

February 17, 1896.

GENTLEMEN: I am glad to add my testimony to the advantages of the Carbonizer, which has been used in our kitchen for four weeks, and which has positively no defect.

There is no interference with the draught, no odor, no uncleanness, and, added to this, no disfigurement of areaway or sidewalk by the garbage can.

I strongly recommend it to all housekeepers and to all those who care for cleanly and attractive streets.

Very truly yours,

ELLEN BRACKETT.

ATLANTIC CITY, N. J., February 19, 1896.

GENTLEMEN : The Carbonizer you attached to my range is a great success. It does all that is claimed for it.

Having experienced the benefits and advantage of using it, I would not willingly again be without one. I have called the attention of the President of our Board of Health to it, and also a few physicians, and expect to show it to several more.

Please send me a dozen or so of your little books. I hope to create a demand for it.

Yours truly,

E. P. WILLIAMS, M.D.

29 DELL AVENUE, HYDE PARK, MASS.,
February 21, 1896.

DEAR SIR: I find that your Household Garbage Carbonizer recently attached to my range is a very handy and efficient appliance. By it the daily refuse of the kitchen is readily transformed into a useful fuel.

Entirely free from inconvenience or annoyance, its use tends directly to promote cleanliness and consequently healthfulness in the home.

Respectfully yours,

MRS. JANET M. HILL.

158 CLINTON STREET, BROOKLYN,
February 22, 1896.

GENTLEMEN : I am glad to be able to report that the Carbonizer you put in for us two weeks ago is doing all that you expected from it.

It effectually disposes of all waste material between one meal and the next, with no perceptible odor, and requiring no attention beyond emptying and refilling three times a day.

It has already made itself a necessity, and I shall gladly call it to the attention of my friends whenever I have opportunity.

Very truly yours,

MARY E. WELLS.

BROOKLYN, February 26, 1896.

GENTLEMEN : Having used the first Household Garbage Carbonizer in Brooklyn, and found it to give entire satisfaction in saving of labor and dispensing with the use of the offensive garbage can, its nuisances, odors, etc., I very gladly testify to the great utility and economy of your very simple apparatus, which, once used, becomes a necessity in every household.

Wishing you the great success you deserve, I am

Yours truly,

ALBERT STEINER,
255 Berkeley Place.

447 FULTON STREET, BROOKLYN,
March 2, 1896.

GENTLEMEN : It is with great pleasure that I write you in regard to the Household Garbage Carbonizer, which we have so successfully put on the Richardson & Boynton Company's Perfect Range, showing the pipes meeting

in the centre, where the Carbonizer can be placed out of the way and also improving the appearance. In the many new household improvements that have come up from time to time we do not know of any that have given such universal satisfaction as has this one.

Yours truly,

W. B. DAYTON & SON.

NEW BRUNSWICK, N. J., March 3, 1896.

GENTLEMEN : It is now over a month since your Household Garbage Carbonizer was placed in my house. It has given entire satisfaction, completely carbonizing the refuse placed in it, and in no instance giving rise to offensive odors.

So much was I pleased with it that it was not only recommended at a meeting of the Board of Health, but also at a meeting of the Board of Trade of this city.

Very truly yours,

HENRY R. BALDWIN,
President Board of Health.

What the Press says.

Colonel Waring, who has been deeply interested in a number of plans for the separation of ashes and garbage from a street-cleaning view-point, declared recently that the Household Garbage Carbonizer was one of the most useful of the domestic implements which had been invented in recent times. He had on his desk a small tin box which contained specimens of carbonized potatoes, onions, lemons, and apple parings, and he invited the *Tribune* reporter to try to detect any offensive smell when the box was opened. He said : "The Carbonizer is set in the pipe of my kitchen range, and it easily takes care of all of the garbage of the kitchen. The girl puts into the compartment of the Carbonizer everything in the way of garbage which does not pass through the strainer of the kitchen sink. If the fire in the range is hot, much of the fine garbage is entirely consumed and passes up the chimney, but ordinarily the garbage is reduced to charcoal, which makes a fine kindling for the fire in the morning. There is not the least smell from the Carbonizer, and it completely does away with the use of a garbage can and swill bucket. There is no danger of fire connected with the use of the Carbonizer."

The burning of household garbage in the kitchen ranges has been recommended by the many sanitary authorities ; but every housewife knows that when fresh garbage or "swill" is burned in the stove there are bound to be bad odors and smoke. Few people care to have the smell of burning garbage pervade their homes. The device which is manufactured by the Sanitary Construction Company removes all of the objections to burning garbage and encourages sanitary methods in the kitchen.—*New York Tribune.*

In speaking of cremation, Hon. C. L. Wilson, President of the Health Department of New York City, said :

"I have seen an apparatus which was exhibited at the Food Show called the Household Garbage Carbonizer, and it seems to me to be excellent in

every way, and thoroughly practical. If everybody could be induced to use this Carbonizer in the household, it would save the city a very large sum of money. There is another method of cremation, where the work is done at a central station. The Engle Crematory is a thoroughly good type of the Carbonizer on a large scale. Until the Household Carbonizer is in general use, the garbage must be disposed of either by a crematory or in the old way—by contract to those who make a profit on the fat or oil in the material. I repeat, however, that the important point is the separation of the garbage from ashes. Of course, if there is nothing but ashes to remove, separation is impossible by this definition. . . .”

It appears to be a practical, inexpensive sanitary invention that is capable of doing much to give relief from the garbage nuisance, if it does not do away with it entirely.

It has been examined by many sanitary engineers and experts, and has found great favor in their sight.

The use of this or some similar invention on a large scale would stop the carting of garbage through the streets, abolish the garbage dumps, do away with all sea dumping and water contaminations, save tremendous sums of money, and bring peace and happiness to the souls of the city officials whose duty compels them to collect and dispose of this vast bulk of dangerous and disease-breeding matter.

If it were possible to have some such instrument as this in general use it would save the city a vast sum of money. At present it costs the city of New York about \$450,000 a year to collect and dispose of its garbage. The greater portion of this sum could be saved, the city made more healthful, and the inhabitants provided with much valuable fuel by the use of a Carbonizer in homes and places of residence.

It would aid Colonel Waring very materially in his efforts to have garbage separated from ashes and other refuse, and in keeping the streets free from the offensive odors that are noticed so frequently while passing houses in front of which receptacles filled with garbage are standing.—*New York Times*.

Until a very recent date all discussion upon the subject of garbage disposal has been directed solely upon the selection of some one of the many expensive public methods, none of which can be brought into use until after the garbage has been endured upon the premises for a time as a nuisance, collected at public expense, and has become intolerable. These methods of dealing with garbage cannot be called preventive medicine, but rather curative, with the physician called at a very late stage of the disease.

We have here represented a single device which deals with all kitchen wastes successfully, with less care and trouble than with the bucket in the yard, and with no odor or objectionable feature whatever. The garbage is dried to a charcoal by the waste heat in the stove-pipe and is used as a fuel to kindle the morning fire. This method is clean, convenient, inexpen-

sive and within the reach of all classes. It is what we call "preventive medicine" in the truest sense, and is worthy of our best attention.

From many other cities comes evidence of the same character—evidence which is conclusive as to the facts and which is obtained from the most authoritative sources. Enough has been said, perhaps, to show that the objections which may be urged against cremation as a mode of burial do not obtain where the disposition of kitchen refuse is in view ; and in conclusion, as the removal of garbage is a public question of no little importance and far-reaching consequences, it may be hoped that, without too much delay, it may also become a "burning" question.—*New York Mail and Express*.

Naturally the instructors in domestic economy in the schools where the practical arts are taught are enthusiastic in the extreme over the Carbonizer, and the great advance in household cleanliness and comfort which it renders possible.

Miss Tracy, preceptress of the department of Domestic Science in Pratt Institute, Brooklyn, does not limit her enthusiastic admiration for the device by any ifs or buts.

"The question of the disposal of garbage," said she to a representative of this paper, "has long been considered a very complex one, owing to the imperative necessity of getting rid day by day of the constant accumulations, instead of waiting for a regular time to 'clean up.' But if done in the right manner and at the right moment a stable boy can accomplish the auger task of a Hercules. Well, this little device has solved the puzzle ; solved it from all sides, simply, cheaply, and conveniently ; and, what is most important, cleanly and healthfully."

Miss Tracy here returned to the range from which the interruption of her visitor had called her, and pulled out the basket to explain the operation of the Carbonizer.

"You can see for yourself how simply the apparatus is managed. This little cylinder, which I now pull out, holds the garbage. No matter if it is a little wet and greasy, if we put it back into the Carbonizer in the stove-pipe, the hot air of the stove, rushing around it and permeating it through the perforations in the sides of the basket, will soon dry out all the moisture and reduce the solid matter remaining to carbon of such fair quality that we may call it charcoal. Indeed, there is a further economic side to the use of the carbonizer, owing to the considerable saving of fuel as well as of labor in kindling the fire in the morning.

"There is absolutely no odor during the process of carbonization, as all gases, of course, are carried off up the chimney. Because of their inconsiderable amount and slow and gradual production, these gases can have no appreciable effect on the health of the city. And so I believe that it is a public duty as well as a private convenience for every householder to place a Carbonizer in his kitchen range. His cook will gladly do the rest, for it is

easier to dispose of the garbage in the Carbonizer so conveniently at hand than even to dump it in a garbage barrel outside in the area. In fact, I think the invention completely solves the troublesome side of the question of the disposal of city garbage, for with all the animal and vegetable matter among the refuse consumed, only the ashes will be left to be taken care of, and this ought to be done, in grading streets, etc., at a profit in place of the present enormous loss, amounting, I believe, to almost half a million dollars a year. I advise everybody to look into the matter.

"Another rather peculiar thing about the effect of the use of the Carbonizer is that it supplies a defect resulting from the overcleanliness of gas ranges, for I understand that the company is manufacturing an instrument which will operate on them as well as upon coal ranges. This defect is that a gas range does not permit even of the disposal of dry refuse, such as sweepings, which the present coal range allows. As the best indication of which way the wind is blowing, this time in the direction of cleanliness, comfort, and health, I would only say that I have recently returned from Boston, where I became attracted to the virtues of the Carbonizer by seeing it in use in all the leading hospitals there. The physicians and nurses spoke in the highest terms of its merits, and said that it was indispensable. I am sure that the homes of this country will not be long in following the example of the hospitals.

"I hope you will give adequate space to this subject, for I know of no recent invention which, because of its practical results, is worthy of more extended adoption."—*New York Mail and Express*, February 8th, 1896.

As the simplicity of the device would seem especially to appeal to the advanced scientific mind which concerns itself with practical results, a reporter of this paper recently called upon Miss Emma E. Sickels, head of the Industrial School, at her Electric Kitchen, to hear her views upon an instrument so intimately related to the purposes of her establishment. With indications on all hands of the highest advance in the science of cookery, surrounded by electrical appliances, indicative that the age of carbon, in its best form, had arrived even in the kitchen, Miss Sickels was as enthusiastic in praise of the Carbonizer as she could possibly have been over one of her own culinary devices, operated by the power which gives her kitchen its name and widespread reputation. "The Carbonizer," she said, "supplies the chief lack that the advance in culinary science has left unsupplied, if not, indeed, actually augmented. This is a ready, quick, and convenient means for the disposal of kitchen refuse. I cannot say too much in praise of the Carbonizer as accomplishing everything claimed for it. With the garbage placed in this handy little scoop, and the scoop inserted in the drum in the stove-pipe, in about twenty minutes' time there remains nothing in the scoop but carbon. In the mean time there has been no odor whatever perceptible. The apparatus does not obstruct the draught in the slightest, whether in operation or not. The carbon remaining is, as you see, practically charcoal, and I will use it in the morning to light the fire."

To an inquiry of the reporter as to whether the original garbage was a fair sample of kitchen refuse, Miss Sickels replied :

" Yes ; the garbage was composed of fresh bones, with portions of gristle attached, orange peel, potato parings, dinner scraps, and miscellaneous articles, containing an average amount of moisture, and, if anything, an excess of grease.

" Think of what an improvement this is over the old way of dumping the garbage in an unsightly barrel, or can, or swill bucket in the areaway ! There it obstructed the passage, disseminated its noisome odors all through the basement, and even through the house, attracted the flies, and, in general, spread disgust and disease throughout its vicinity.

" Then, too, to me, who am an economizer by instinct as well as profession, the fact that the Carbonizer makes quite a saving in fuel is a very important item. I have made an especial study of the most economical methods of cookery, and while this device does not exactly come under the head of cooking apparatus, nevertheless it is so closely related thereto that I do not hesitate to recommend it to all the progressive housewives of the country as an indispensable adjunct to every model kitchen, combining in itself, as it does, all the elements of cheapness, convenience, and thorough cleanliness."

Mrs. Frances G. Shaw was also interviewed at her residence, No. 118 East Thirtieth Street, about the merits of the Household Garbage Carbonizer.

One point in particular was emphasized by Mrs. Shaw, and that was that the fuel saved by its use would pay for the apparatus several times over, especially in the great hotels. There the daily accumulations of garbage are a great nuisance, and this may be converted, by the use of the Carbonizer, into a source of absolute profit.—*New York Commercial Advertiser*.

There is no qualification whatever to the claims for the absolute effectiveness of the Carbonizer. Through its use not alone the garbage problem of the household but of the entire city can find a complete solution.

Such authorities as Dr. S. H. Durgin, Chairman of the Boston Board of Health ; Mr. C. A. Young, Sanitary Superintendent of Boston ; Charles G. Wilson, President of the New York Board of Health ; and last, but not most unimportant, Colonel Waring, New York's efficient Commissioner of Street Cleaning, have been consulted in reference to this matter. All have commended the method of procedure in which the Carbonizer attacks the problem.

Dr. Durgin, in particular, is on record as saying that " if this apparatus were brought into general use in Boston, it would stop the well-known nuisances of more than 50,000 swill buckets in the city, bring a healthful convenience to as many families, hotels, and restaurants, relieve our streets of swill carts, save our treasury nearly \$200,000 annually, and spare the Health Board many other annoyances."

The saving would be much more than the double of this for New York City.

By the use of the Carbonizer obedience to the advice of Colonel Waring to New York householders (that they should separate animal and vegetable matter in kitchen refuse from the ashes) could be easily and cheerfully accorded, and the ideal of President Wilson of the Health Board, when "every house is a Health Board of its own," at last be completely realized.

Therefore public duty, as well as private convenience, dictates to every householder that he should procure a Household Carbonizer.—*New York Press*.

Sooner or later the primitive and dangerous system under which the garbage of the Greater New York is taken a greater or less distance out to sea, where it is dumped, to be washed back upon the shores of Long Island, will be supplanted by something modern, rational and sanitary. The company that controls the system that ultimately determines whether it be destruction, reduction, or conversion into commercial commodities will secure a large, juicy plum.

It is the extreme value of this privilege that is responsible for the fact that New York and Brooklyn alone, of the cities of the United States, are not disposing of their refuse in a scientific way. The representatives of at least six concerns are located in New York to-day, all with sumptuous offices. They are mixing up in politics and fraternizing with municipal officials, executive and legislative. There are millions in it, and each is playing his cards cautiously.

In the meanwhile a little device has come into use that may solve the garbage problem and render unnecessary any elaborate and extensive system of public furnaces or crematories, and also save the enormous annual expense of the collection of a city's refuse. It is a household crematory, and it is such a simple thing that the only wonder is it was not invented years ago. It has passed the experimental stage.

The owner of the device has over five hundred testimonials from well-known people in New York, Boston, and Philadelphia.

This household cremator is also applied to gas ranges, and the refuse converted into ashes. The system is, of course, used on an extended scale in hospitals and public institutions. The New York Hospital has cremated its own refuse for two years. President Wilson, of the Board of Health, has written that household cremation of refuse will greatly simplify the problem of guarding the city's health.—*New York Morning Journal*.

The recent report to Mayor Strong of Colonel Waring, Commissioner of Street Cleaning for the City of New York, in which he recommends, as a solution of the garbage problem, the introduction in each household of "the process of destruction or carbonization in connection with the kitchen fire," has caused a widespread and renewed interest among the women's circles in

that much-discussed but hitherto unsettled question, What is the best method of disposal of kitchen refuse ?

This report and recommendation has especially interested the members of the Women's Health Protective Association of Brooklyn, before which, a short time ago, Colonel Waring delivered an address upon sanitation, in the course of which he strongly endorsed the method of household carbonization in the disposal of garbage. Many of the leaders of the association had already possessed themselves of the Sanitary Construction Company's Household Carbonizer, and viewed it as a perfect success from the housewife's point of view, and were, therefore, the more interested in its bearing upon the question of the city's health and cleanness.

Mrs. William Barry, of 382 Carlton Avenue, who was the first of the association to procure a Carbonizer ; Mrs. Jenks, her daughter, the wife of ex-Judge Advocate A. F. Jenks, of 147 Joralemon Street, and Mrs. Brackett, of 227 Clinton Street, in the houses of which ladies the instrument has been longest in use, especially express great satisfaction with the entire efficiency of the device, and take delight in showing its operation to their friends.

In fact, it is by this method that its adoption has been furthered among a host of the leading people of Brooklyn, such as Mrs. White, the wife of Mr. A. T. White, member of the Common Council, of 40 Remsen Street ; Mrs. S. B. Wood, of 212 Schermerhorn Street ; Mrs. H. B. Claffin, of 55 Pierrepont Street ; Mrs. M. E. Wells, whose great interest in sanitation is well known, and Mrs. Reynolds, wife of E. B. Reynolds, the large coal merchant of Williamsburgh, residing at 184 Patchen Avenue.

The Brooklyn ladies are not unique in their interest in the cleanliness of their homes and the health of the public. Similar societies to those for which the city named by Julian Ralph "the wife of New York" is noted, are found in the lesser towns of residence surrounding the great metropolis.

Among the most efficient of these is the Improvement Society of the Oranges, which concerns itself with the public interests, such as the sanitation, education, distribution of charity, etc., of the beautiful villages clustering at the foot of the hills which the Jersey men know as the Orange Mountains.

Recently Mr. Eugene Burton gave a talk to the ladies of the society upon the disposal of garbage by the special method of household carbonization, illustrating and enforcing his remarks by exhibiting a model instrument and a box containing the completely carbonized remnants of all sorts of garbage which he had recently reduced to charcoal in the apparatus in his own kitchen range.

At the close of his remarks, Mrs. Louis De Blois Gallison, the president of the society, who had a Carbonizer in her own house, fully corroborated everything he had said in praise of the Carbonizer.

"My kitchen is the pride of my heart, and I would not introduce anything into it that I could not heartily endorse. The Carbonizer does everything that is claimed for it. It does not interfere with the draught or operation of the

range in the slightest, is absolutely free from odor, and furnishes such an excellent quality of charcoal for kindling that I have held it in my fingers and lighted it with a match. I invite you all to come around and see it."—*Brooklyn Eagle*.

W. F. Whitmore, of this city, No. 190 Pearl Street, who has the local agency, has recently introduced a few of these Household Carbonizers in Hartford houses, and he gets from people here the same cordial endorsement for the invention that Colonel Waring gave it when he lectured here recently. The verdict is that the Carbonizer renders the garbage pail unnecessary. That in itself is a great advance in cleanliness and healthfulness, as well as in convenience. But incidentally the apparatus also turns the garbage into a combustible material that makes it the best of kindlings.

This contrivance is furnished for \$5.00, and its manufacture and sale are plain business operations; but its work is a public service, making life easier, healthier, and cleaner, and its endorsements come from such high authorities, and are so strong and complete that it is doing a public service to call attention to the new invention.—*Hartford Courant*.

Dr. H. R. Baldwin, the President of the Board of Health, one of our most vigilant and progressive public officers, has been doing a little experimenting of late with the Garbage Carbonizer, and thinks that the results show a solution of the ever-occurring question of what shall we do with our garbage that the health of the community shall not be offended. He believes that all garbage should be consumed in the household in which it is created, and that nothing should be carted away except ashes.

The question is one which has particular interest to this city, as the garbage matter has been uppermost for some time, while the solution is a simple little article fastened to the stove-pipe, which converts all garbage into charcoal and provides fuel with which to light the fire on the morrow.

This city is not the only place that has been stirred up by the garbage question. Colonel George E. Waring, the Street Cleaning Commissioner of New York, says:

"Removal from the houses by the public service should be limited to clean ashes and such refuse as cannot be burned, sold, or given away. Nothing should be thrown into the streets or deposited for removal by the public scavenger that can, even at some cost or inconvenience, be disposed of on the premises where it is produced."

For some time past the local Board of Health has been endeavoring to have the Common Council purchase covered carts for the removal of ashes, and have tried to enforce the city ordinance providing that swill and ashes shall not be mixed, but shall be placed for the collector in separate receptacles. They have not been successful in either of these attempts. Swill has been

mixed with ashes, and Contractor Barbour has been called upon to remove all sorts of matter in all conditions of decay.

This is no longer necessary. Sanitary science has discovered a means not only of instantly destroying the garbage as such, but of converting it automatically and economically into fuel. With a Household Garbage Carbonizer, as the new device is called, the garbage becomes an odorless and tasteless charcoal, always on hand, with the evening paper of yesterday to make the morning fire without smoke and delay. Thus every housekeeper in the city can be a factor in maintaining the city's health, can make charcoal in their own kitchen, and can forever abolish swill.—*New Brunswick News*.

When our first Board of Health was organized they corresponded with eminent sanitary engineers in reference to the difficult problem of garbage disposal.

Every sanitarian is well aware of the fact that decomposing garbage is one of the most prolific sources of disease. They found that the methods most approved were by cremation in large furnaces, which involved great expense in construction and considerable in operation for cartage, fuel, pay of employés, etc.

About six months ago Professor Morse, of New York, a distinguished sanitarian, patented a Garbage Carbonizer which can be used in any kitchen with small cost and at no expense for running. It takes up no space otherwise needed.

Dr. J. M. Davies, ex-President of the Board of Health, seeing it advertised last fall in the *Annals of Hygiene*, sent for one, which T. O. Slater & Co. placed in his kitchen.

It has been in operation for three or four months and gives excellent satisfaction. The garbage is put into a scoop which fits into a cylinder in the stove-pipe, and from the heat which has been utilized in the stove is soon reduced to charcoal without any odor whatever during the process.

Our enterprising fellow-citizens, T. O. Slater & Co., have some of the Garbage Carbonizers on exhibition in their store, and are prepared to furnish them to those who appreciate this sanitary luxury.—*The Mirror, Warren, Pa.*

FROM THE "ANNALS OF HYGIENE," OFFICIAL ORGAN OF HEALTH OF THE
STATE BOARD OF HEALTH OF PENNSYLVANIA, IN SEPTEMBER ISSUE, 1895.

HOUSEHOLD GARBAGE CREMATION.

With great pleasure and perfect justice do we call the attention of our friends and subscribers to the description of the Household Garbage Carbonizer, elsewhere published in this *Journal*. Cremation is now universally accepted not only as the best but as a perfectly satisfactory method of disposing of garbage; and now that a suitable device for household use has been introduced,

it should be considered as essential to the complete equipment of the healthful city home as is the universal sewer connection.

A recent talk to the young women of the Domestic Science Department of Pratt Institute, by Colonel George E. Waring, Street Commissioner of New York, should have been heard by every housekeeper :

"Garbage," said Colonel Waring, "should never be dumped into the harbor, or otherwise disposed of where it can be a nuisance, for that is no longer necessary."

He then called attention to a new device for burning the ordinary accumulation of house garbage that is destined to simplify the disposition of the city's waste. This is a sheet-iron box known as a household carbonizing chamber, and is affixed to the stove-pipe, where it does not interfere with the draught. It is convenient, inexpensive, and apparently long-lived. When there is a fire in the kitchen range this chamber is always hot enough to dry damp garbage, potato parings, bones, etc.—everything, in fact, but liquids.

After becoming charcoal the contents of the box can be used for fuel next morning. The results of this simple method are no odor, no trouble, no accumulation of garbage to draw flies, no pail to keep clean. These cost about \$5 to put in, but in their use seems to lie the solution of a great question.

Both the Mayor and Colonel Waring have tested this system of garbage burning in their own homes, and find it most successful. "With the intelligent co-operation of the housewife," said Colonel Waring, "another year will solve the garbage question for New York." He might have added, "and save the city about half a million dollars every year for collecting and disposing of her swill."

He closed his talk by a little *résumé* of the work attempted and completed during the past six months on the streets of New York, during which he paid this encomium to women: "The streets of New York would not be to-day in the condition they are had it not been for the persistent, untiring efforts for their betterment by women. The whole structure of municipal reformation and street improvement would feel a tremor of insecurity if anything happened to withdraw the interest and support which they have shown to this movement." Here is encouragement for us all.

Why could not Brookline follow the example already set by a number of her citizens and dispose of her swill in the way Colonel Waring recommends? It is an encouraging fact that there are several hundred of the carbonizers in active operation in Boston.—*The Chronicle, Brookline, Mass.*

FROM THE JOURNAL OF MASSACHUSETTS ASSOCIATION BOARDS OF HEALTH FOR
DECEMBER, 1895.

REMARKS OF W. F. MORSE, ESQ.

MR. CHAIRMAN: The paper read by Dr. Field covers the whole situation as regards the present methods in use for garbage disposal so completely that

I can add nothing to it. The point of the whole question seems to be just here. None of the methods under trial seem to have been fully demonstrated or absolutely and entirely satisfactorily.

Where the systems of reduction and methods of cremation are employed, each have their advocates ; but it does not appear that either one or the other has perfectly solved the question. Both methods are going on ; and, when they get to the point of efficiency and economy, then municipalities will be prepared to decide which one they prefer.

But what I wanted to say was that, if the garbage can be disposed of in the household without offence and at no extra cost, it would save an enormous sum of money to the cities as well as discomfort and annoyance to the household.

The question is, Can it be done ? We know that it can be done by burning in the range or stove, but we know also that, if we do this, we shall have the nuisance of an offensive discharge from the chimney, and in the end the destruction of the range or stove fittings.

How, then, can it be disposed of in the household without these results ?

Three years ago the presiding officer of this meeting said to me : " You are going in the wrong direction in advocating public disposal of waste. Each householder should be in a position to destroy his own waste without extra fuel, and with no nuisance resulting." I replied : " There have been some attempts to do this ; but, so far as my investigation shows, these have been failures. At present we cannot accomplish this if we tried."

The matter rested until a year ago, when he suggested an idea which has now been carried into practical operation, resulting in an improved system of domestic disposal by first drying or carbonizing the garbage and then burning it, which seems to be entirely reasonable and economical.

If you take fresh kitchen swill, remove it a few feet from the fire-box of the stove or range, and apply a moderate, continuous heat, which will not disengage the gases, but will drive off the water, the residuum after this evaporation has been accomplished is a charcoal which will burn readily and quickly in the fire-box, giving a clear, bright flame, supplying in some degree the place of fuel.

If at some point in the stove-pipe before it enters the chimney flue there is fixed a receptacle around and through which the heat can pass without interference with the draught, and the garbage is placed in this receptacle in such a way as to allow the direct contact of the heat with the material to be dried, the process of evaporation can be carried on without offence, with a minimum amount of trouble, and can be made continuous during the time the heat is in the stove or range.

I have seen this done. I believe this to be a step in advance of real and practical value, both to the municipality and the citizen ; and it seems to be an addition of a new system or method of garbage disposal which ought to be considered whenever this question comes up for examination.

The experimental driers heretofore in use are susceptible of being greatly improved. If there be no serious objection from a sanitary point of view (and this seems to be assured by the evidence of hundreds now in use), and the difficulties encountered can be overcome by the adoption of improved apparatus, the underlying principle of garbage disposal by the surplus heat of the kitchen stove, on the premises, without offence, and with reasonable speed, has certainly been demonstrated as being entirely practicable, a great saving over the public methods of reduction or cremation as at present practised, and is entitled to be taken into account whenever and wherever this matter of garbage disposal is under consideration.

(Received too late for insertion in proper place.)

DEPARTMENT OF HEALTH.

COMMISSIONER'S OFFICE, 38 AND 40 CLINTON STREET.

Z. Taylor Emery, M.D., Commissioner,
R. M. Wyckoff, M.D., Dep'y Com'r.

Geo. E. West, M.D., Secretary.
Alex. H. Van Cott, Counsel.

BROOKLYN, N. Y., March 13, 1896.

The Sanitary Construction Company, 58 Pine Street, New York City.

GENTLEMEN : After several weeks' trial of your Household Garbage Carbonizer at 214 Schermerhorn Street, where there are on an average about thirty boarders, I am pleased to say that it disposes of all the garbage (from 30 to 40 lbs. daily) in a most thorough manner. The kitchen refuse, even including large bones, is perfectly carbonized inside of two hours, and then burns readily in the stove without giving off any offensive odors.

What has been done at this house could readily be accomplished in most of the houses in this city at a small expense to the owners. My landlady very pertinently says : " I never spent money for an article which has given me more satisfaction than this. There is now no garbage can which must be left standing out upon the curb for several hours every other day waiting for the garbage man ; no decaying matter to give off vile odors or to draw the flies in summer."

If the use of the Carbonizer were to become general, the serious problem of the disposal of from 200 to 250 tons of garbage per day would shrink to infinitesimal proportions, the city would be saved many thousands of dollars yearly, and one of the most unsightly, unhealthful, and disgusting nuisances would be abated.

Very respectfully,

WILLIAM W. LOCKE,
Sanitary Engineer Department of Health.

SPECIAL ANNOUNCEMENT.

THE Household Garbage Carbonizer

Is the Sole and Exclusive Property

...OF THE...

SANITARY CONSTRUCTION COMPANY

With General Offices at

56-58 PINE STREET,

NEW YORK CITY.

The invention is completely protected by several patents allowed and claims now pending in the U. S., and by patents in Foreign countries. These patents and claims cover every form of Carbonizer which is worth anything for practical use, and any infringement of the same will be promptly proceeded against whenever and wherever found. The *Carbonizer* has been in use more than sixteen months, has been thoroughly tried under every possible condition where household waste is to be disposed of, and has met all the requirements made upon it.

It has been examined and reported upon favorably by Boards and Commissioners of Health, by Committees of Municipal Councils, and Sanitary and Improvement Associations, it is in use in the households of leading Sanitarians throughout the country and favorably endorsed by them, is recommended by eminent Architects and Engineers who have examined it from a professional and scientific point of view, it is endorsed by many Women's Clubs and Cooking Schools, and large numbers are in use in the households of leading families in the larger cities, and commended by them.

A Medal has been awarded the invention by the *International & Cotton States Exposition, Atlanta, Ga.*, a Silver Medal by the *Mechanics' Institute, Boston, Mass.*, and a Certificate of Merit by the *Franklin Institute, Philadelphia, Pa.*

Since the usefulness and efficiency of this invention is certified to by so great a number of disinterested people, manifestly it is entitled to consideration where the disposal of household waste is concerned.

THE HOUSEHOLD GARBAGE CARBONIZER

Is sold by Companies organized to control the invention in the several parts of the country.

For all the New England States it is controlled by

The New England Sanitary Company, 83 Union Street, Boston, Mass.

For the States of North Carolina, South Carolina, Georgia, Florida, Alabama and Eastern Tennessee by

The Southeastern Sanitary Construction Company, Temple Court Building, Atlanta, Ga.

For the States of Illinois, Wisconsin, Minnesota and Iowa by the

Western Sanitary Construction Company, 14 Pacific Ave., Chicago, Ill.

The State of Ohio by the

Central Sanitary Construction Company, 611 West 9th Street, Cincinnati, Ohio.

The States of California, Oregon and Washington by

The Pacific Sanitary Construction Company, Stockton, Cal.

All other States, and all territory not assigned, including all **Foreign Countries**, are controlled by the **SANITARY CONSTRUCTION COMPANY** from New York City, to whom application for territory should be addressed.

A Descriptive Pamphlet is sent to every reputable dealer in Hardware, Stoves and kindred branches of the House Furnishing business, and their attention is respectfully asked to the merits of this invention.

The Company will answer all inquiries, receive and forward orders to the respective Companies and General Agents, and will send samples of Carbonizers to any one who handles or deals in House Furnishing Goods, at the discounts quoted to the trade.

The Company will in its own territory, assign the selling rights to a single responsible dealer for each particular place, and will so far as possible protect these selling agents against intrusion by competitors. The other companies will do the same within their own territory.

THE SANITARY CONSTRUCTION COMPANY

Will send any dealer a sample Carbonizer of either of the Standard sizes on receipt of an order, and give the rates of discount quoted on the discount sheet.

The cash must accompany these sample orders, and the Carbonizer will be sent F.O.B. New York by freight or express as ordered.

Discount sheets sent on application to

SANITARY CONSTRUCTION CO., 58 PINE ST., NEW YORK.

Sanitary Construction Company are Manufacturers of Apparatus for Steam Disinfection.

THE term "Disinfection" ought only to be applied to that process which is absolutely destructive of the virus of disease. Many substances possessing antiseptic properties are erroneously supposed be disinfectants, whereas they are merely deodorants. A disinfecting agent to be of use must not only arrest the growth, but absolutely destroy the morbid germ. Any action short of this is worse than useless as regards checking a disease, for it gives false security, and so encourages laxity in the exercise of other precautionary measures.

Sanitarians are agreed that the essential conditions for an absolute effective disinfecting agent must be as follows :

It must be capable of killing disease germs and their spores.

It must be applied to every part of the material infected.

The application must be maintained for a sufficient time.

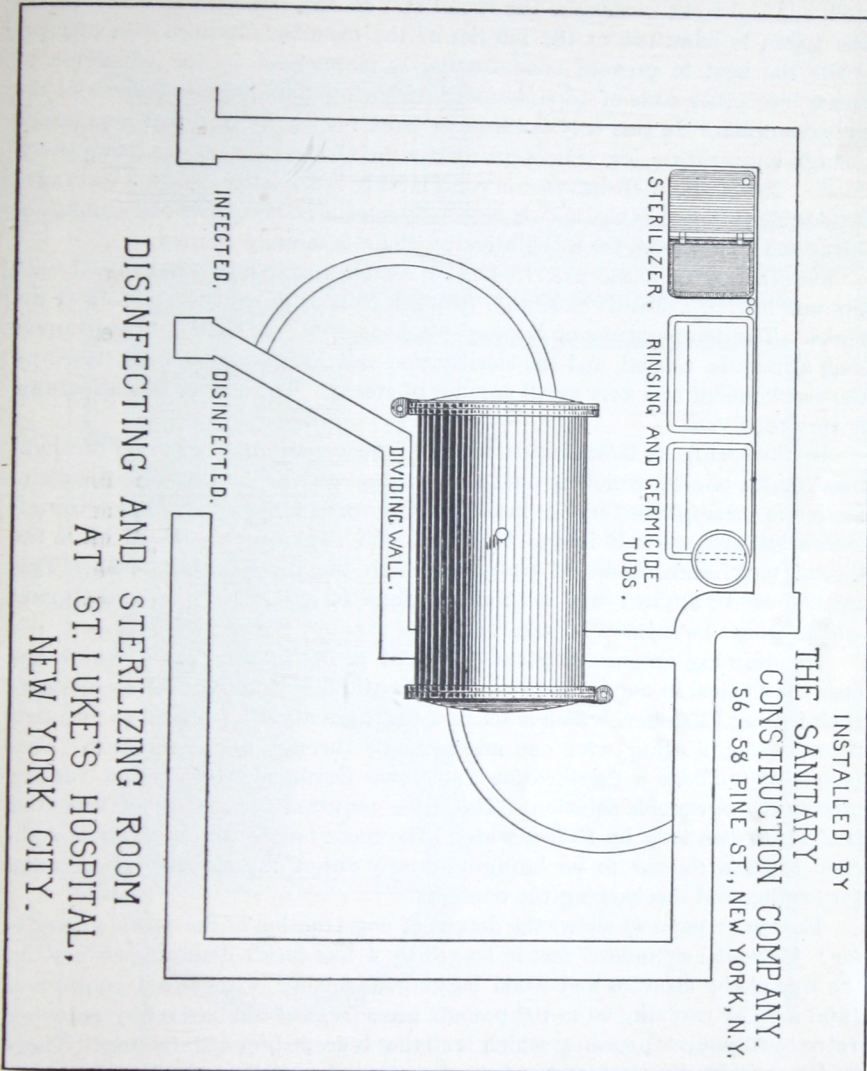
A long series of carefully conducted experiments in this country and abroad has positively proven that *Heat*, dry or moist, is the only means of fulfilling all of the conditions which are essential for a perfectly effective disinfecting agent. It therefore remains to show how this most effective means can be best employed. The putting into practical use of the discoveries of Sanitary and Scientific Experts can only be accomplished by the exercise of well-defined and positive business methods.

The Sanitary Construction Company are the manufacturers of apparatus for the destruction of germs which are the vehicles for communication of infectious diseases. This apparatus may be defined under the following heads :

1. *Disinfection by Steam.*
2. *Sterilization by Boiling Water.*
3. *Disinfection by Germicides.*
4. *Disinfection by Dry Heat in closed chambers where the temperature can be raised sufficiently high to destroy many forms of bacilli without injury to the goods.*

Steam Disinfecting Apparatus is constructed in two general forms :

STEAM CHAMBERS WITH DOUBLE WALLS, rectangular in form, with a door at each end and a car running into the interior on tracks to receive the infected goods. The use of two cylinders, one inside the other, permits the cavity between the two formed by the double walls to be utilized to prevent the loss of heat in the interior chamber, and thus check condensation of steam when introduced at high pressure. This form of steam chamber is constructed where the material to be disinfected is large in quantity, as would be the case at the Disinfecting Station of a large city. The process of disinfection is



somewhat slower than in other methods, and the cost of the Steam Chamber is considerably greater than the simple form of a single cylinder.

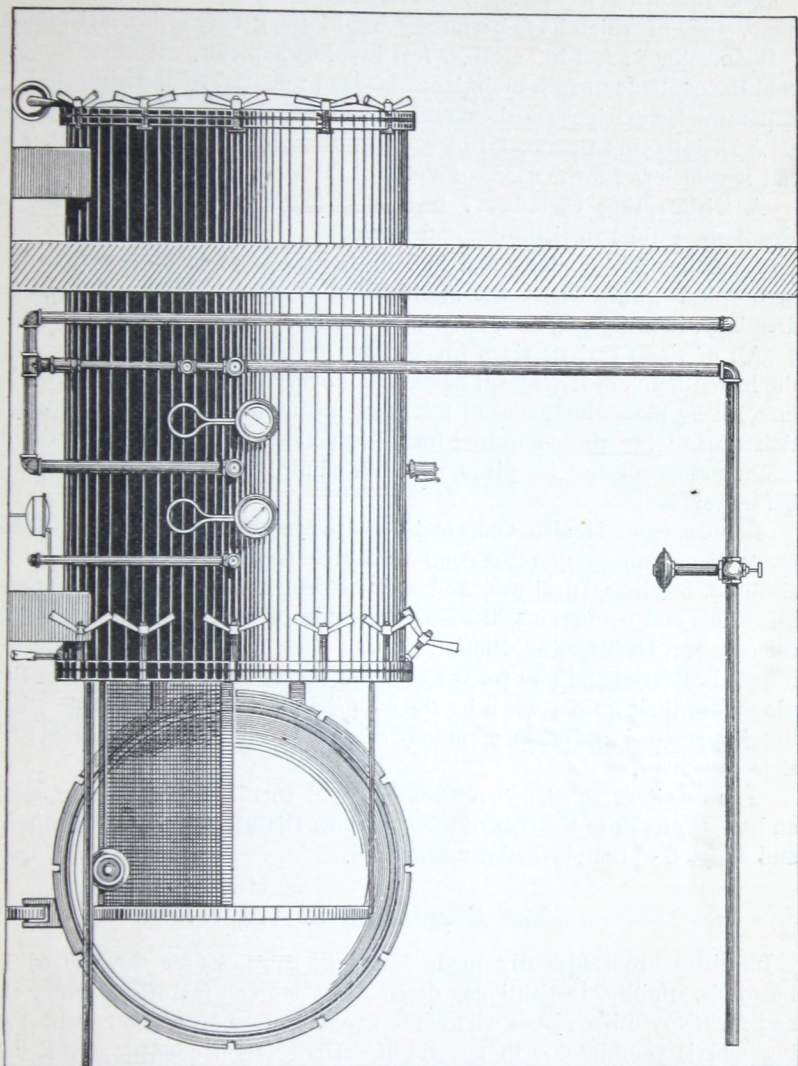
A SINGLE STEAM CYLINDER, circular in form, provided with a door at each end and a car to contain the material. In this method of construction the steam is admitted to the interior of the chamber through coils of pipe, while the heat to prevent condensation is maintained by the admission of steam into other coils of pipe, both of which are fixed on the interior of the cylinder walls. In this way the heat is more readily applied and maintained at high temperature, the time required for disinfecting the goods being shortened. This form of Disinfector is considerably less in cost than the rectangular double-jacketed style, and is especially useful in Hospitals and Public Institutions where room for a Disinfecting Plant is usually limited.

STERILIZATION TANKS are circular or rectangular copper tanks lined with tin, and having a steam connection through coils of pipe at the bottom of the tanks. The temperature of boiling water is thus obtained and kept up as long as may be needed, and the sterilization and disinfection accomplished by the employment of a very small amount of steam. The cost of this apparatus is very moderate.

DISINFECTION BY GERMICIDES includes the construction of two Porcelain-lined tanks, one of which is used as a rinsing vessel. In this case the disinfection is accomplished by the insertion of the article to be treated in a Germicide solution contained in the first tank, and then quickly rinsed off in the second tank, and afterward passed through the Sterilization tanks. This method can be applied only to smaller articles of goods and personal apparel which cannot be injured by saturation.

The drawing on page 47 gives a plan of a *Disinfecting Plant* which has been established in one of the New York hospitals. The plan shows a Steam Disinfecting Chamber, which is set in a partition dividing the room into two parts, communicating with one another only through the Disinfector. This plan also includes a Sterilization Tank, two Germicide tubs, and a vat for mixing the Germicide solution. The space required for a plant of this kind is about 21 feet long by 15 feet wide. The room for the tracks must be sufficient to allow the car to be brought entirely out of the chamber at each end for loading and discharging the contents.

The cut on page 45 shows the details of construction of the *Steam Disinfector*: A circular cylinder 7 feet in length by 4 feet inside diameter, covered on the outside by asbestos and wood lagging, furnished with steam connection from a boiler carrying 90 to 100 pounds pressure, but diminished by reducing valve to 20 pounds pressure, which is all that is needed for disinfecting. There is also connected an apparatus for exhausting the air from the interior of the cylinder, escape valve, gauges, and pyrometers showing the pressure and the degrees of heat obtained. A trial of this apparatus showed that in $3\frac{1}{2}$ minutes a vacuum could be obtained, and in 4 minutes more replaced by a pressure of 20 pounds of steam, giving a temperature of 240° . A further trial showed that 50 minutes only are required to place the goods in the car,



STEAM DISINFECTOR AT ST. LUKE'S HOSPITAL, NEW YORK CITY.
INSTALLED BY THE SANITARY CONSTRUCTION CO., N.Y. CITY.

seal the disinfecting chamber, perform the operation of disinfecting and taking out the goods on the disinfected side.

The following sizes of Disinfectors have been constructed by this Company, some of which have been for years in use, giving entire satisfaction :

Disinfector 22 feet in length, 7 feet interior diameter, with two cars, which hold the contents of four ambulance loads of material to be disinfected. This apparatus is sufficient for the needs of a city of the largest size.

A Disinfecting Chamber 10 feet long, diameter 5 feet, fitted with a single car, is sufficient for the needs of a city of moderate size.

A Disinfecting Chamber 7 feet long, 4 feet in diameter for the use of Hospitals, Public Institutions, and towns.

A smaller Disinfector 3 feet in length by 1½ feet in diameter, to be used in hospital work, where the sterilization of small articles like bandages, dressings, instruments, etc., may be necessary.

All of these various sizes proceed by first obtaining a vacuum, then by the introduction of live steam penetrating every part of the material to be disinfected by the maintenance of this temperature and prevention of condensation during the time required for disinfection and by the removal of the steam and supplying its place with heated air, thoroughly drying the goods before removal.

Reports from Health Officers in this country show that the lack of adequate disinfecting apparatus compels the destruction every year of infected clothing, bedding, furniture, and articles which have been in contact with infectious and contagious diseases, the value of which will more than defray the cost of a Disinfecting Plant in every case. It is poor economy to burn infected material and pay for the same, or if not paid for, to compel the people to lose their goods, when by the adoption of a modern scientific Disinfecting Apparatus large sums of money can be saved and the progress of infection prevented.

The Sanitary Construction Company will furnish upon request estimates and all details as to the cost of these various Disinfectors of any size required and adapted to the particular use needed.

The Cremation of Waste.

Inquiries are frequently made for large Furnaces for the use of hotels, hospitals, public institutions, department stores, factories, livery stables, and for many other places where the accumulation of waste becomes annoying and is troublesome to get rid of. Under such conditions the value of the material which thus accumulates is a secondary consideration. The incineration of this waste in the building where produced by the speediest possible means is the most satisfactory way to dispose of it.

Cremating Furnaces adapted to any given location, to destroy any particular class of waste with economy in fuel and labor, are specially built by the *Sanitary Construction Company*.

Sanitary Construction Company,

Office, 56-58 Pine St., New York.

Sole Manufacturers and Owners under American and Foreign Patents

OF THE HOUSEHOLD GARBAGE CARBONIZER,

For the Disposal of the Waste of Individual Households

SANITARY CREMATING FURNACES.

This Company is prepared to construct **Cremating Furnaces** for the disposal of the waste from Hotels, Factories, Department Stores, Livery Stables, Hospitals, Public Institutions, Towns and Cities.

These Furnaces are adapted to the place where located, to the amount of waste to be destroyed of whatever kind or character, for the use of any available fuel, coal, gas, oil or wood, are strongly built, complete with every detail to make them convenient and accessible, simple in construction, and absolutely sanitary in operation.

THIS COMPANY ARE ALSO MANUFACTURERS OF

STEAM DISINFECTING APPARATUS.

Steam Disinfectors, double cylinders, rectangular or circular in form, for disinfecting by Steam at High Pressure.

Steam Disinfectors, single cylinders, circular form, especially adapted for Hospitals and Public Institutions.

Low Pressure Steam Disinfecting Apparatus, complete with boiler and all pipe attachments.

Sterilizing Tanks for cleansing and sterilizing by boiling water, of all white goods.

Disinfecting Tanks for Germicide and Chemical solutions.

Hot Air and Fumigation Chambers for preliminary cleansing of clothing.

The Company has constructed several of the most successful plants in the United States.

Pamphlets containing full details of these various appliances will be sent upon application to

SANITARY CONSTRUCTION CO., 56-58 Pine St., N. Y.

